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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,372	03/29/2004	Jesse N. Palmer	5646-001	7608

25184 7590 03/09/2005

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EXAMINER

SAWHNEY, HARGOBIND S

ART UNIT PAPER NUMBER

2875

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/812,372		PALMER ET AL.	
	Examiner		Art Unit	
	Hargobind S. Sawhney		2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/04, 8/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because line 3 includes the legal phrase "comprise". The phrase "comprising may be replaced with -- including --
Correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12, 14 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanenari et al. (6,431,923 B1).

Regarding claims 12, 14 and 17, Kanenari et al. ('236 B1) discloses a pneumatic tire 1 (Figure 1) comprising:

- sidewall "a" (Figure 1, column 6, lines 27 and 28);

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- a photo-luminescent section "b" positioned on the side wall "a", and the photo luminescent section containing phosphorescent layer (Figure 1, column 2, lines 45-60, and claims 2 and 4); and
- a reflective section "c" positioned on the side wall "a" (Figure 1, column 2, lines 45-60, and claim 2);
- the photo luminescent section and the reflective section are molded into the side wall "a" (Figure 1, claims 2 and 4); and
- the photo-luminescent section made of phosphorescent glow pigmented particles (abstract).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 3, 5, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Elam, Jr. et al. (US Patent No.: 5,823,653) in view of Kanenari et al. (6,431,923 B1).

Regarding claims 1, 9 and 10, Elam, Jr. et al. ('653) discloses a human-powered vehicle including 100 comprising safety light structure (Figure 1) comprising:

- a photo-luminescent section 54 (Figure 1, column 2, lines 53 and 54) and a reflector (Figure 1, column 2, line 38) positioned on the frame.

However, Elam, Jr. et al. ('653) does not specifically teach the photo luminescent material and reflective sections positioned on at least one wheel. In addition, Elam, Jr. et al. ('653) does not specifically teach a light source directing its emitted light towards the photoluminescent material.

On the other hand, Kanenari et al. ('236 B1) discloses a pneumatic tire 1 (Figure 1) comprising:

- sidewall "a" (Figure 1, column 6, lines 27 and 28);
- a photo-luminescent section "b" positioned on the side wall "a", and the photo luminescent section containing phosphorescent layer (Figure 1, column 2, lines 45-60, and claims 2 and 4); and
- a reflective section "c" positioned on the side wall "a" (Figure 1, column 2, lines 45-60, and claim 2);

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify to modify the light safety structure of Elam, Jr. et al. ('653) by positioning the photoluminescent section and a reflective section on at least one wheel as taught by as taught by Kanenari et al. ('236 B1) for the benefits and advantages safety indication visual in light as well as in dark or low level light.

In addition, It would have been obvious to one of ordinary skill in the art at the time of the invention to realize the operational – after glowing - requirement of photoluminescent material, and thus provide a light source, either of UV spectrum or

visual spectrum, directing its light towards the photo luminescent section for the benefits of making the photo luminescent material glow after the light source is removed from operation.

Regarding Claims 2,3, 5 and 7, Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) discloses the human-powered vehicle additionally comprising:

- sidewall "a" (Kanenari, Figure 1, column 6, lines 27 and 28);
- a photo-luminescent section "b" positioned on the side wall "a", and the photo luminescent section containing phosphorescent layer – sticker - (Kanenari, Figure 1, column 2, lines 45-60, and claims 2 and 4);
- a reflective section "c" positioned on the side wall "a" (Kanenari, Figure 1, column 2, lines 45-60, and claim 2);
- the photo luminescent section and the reflective section are molded into the side wall "a" (Kanenari, Figure 1, claims 2 and 4); and

6. Claims 4 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Elam, Jr. et al. (US Patent No.: 5,823,653) in view of Kanenari et al.

(6,431,923 B1) as applied to Claim 2 above, and further in view of Bare, IV (US Patent No.: 5,523,925).

Regarding claims 4 and 11, dependent on claims 2 and 1 respectively, Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) discloses the human-powered vehicle comprising a photoluminescent section. However, neither combined nor individual teaching of Kanenari et al. ('236 B1) and Elam, Jr. et al. ('653) teaches a light source

mounted to a human-powered vehicle frame, and the light source directing light towards the photoluminescent section.

On the other hand, Bare, IV ('925) discloses a human-powered vehicle including a light source 1 mounted on a frame 101 of the human-powered vehicle (Figure 1, column 2, lines 49, 50, 52 and 64). The light source 1 additionally includes a transparent cover transmitting light in multi-direction.

In addition, It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the safety light structure of Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) by providing the light source as taught by Bare, IV ('925) for benefits of extending the glowing capacity of the photo luminescent material.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Elam, Jr. et al. (US Patent No.: 5,823,653) in view of Kanenari et al. (6,431,923 B1) as applied to Claim 2 above, and further in view of Majumdar et al. (US Patent No.: 6,807,995 B1).

Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) discloses the human-powered vehicle comprising a photoluminescent section. However, neither combined nor individual teaching of Kanenari et al. ('236 B1) and Elam, Jr. et al. ('653) teaches the photoluminescent material including Zinc Sulfide mixed with an epoxy binder.

On the other hand, Majumdar et al. ('995 B1) discloses a tire including photoluminescent material including Zinc Sulfide mixed with an epoxy binder (Figure 1, column 5, lines 21, 31 and column 6, lines 6-12).

In addition, It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the safety light structure of Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) by providing the photoluminescent material as taught by Majumdar et al. ('995 B1) for the benefits of improved color retention during aging of the photoluminescent material for safety light structures.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elam, Jr. et al. (US Patent No.: 5,823,653) in view of Kanenari et al. (6,431,923 B1) as applied to Claim 2 above, and further in view of Finkenbinder (US Patent No.: 4,121,851).

Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) discloses the human-powered vehicle comprising a photoluminescent section. However, neither combined nor individual teaching of Kanenari et al. ('236 B1) and Elam, Jr. et al. ('653) teaches a reflective sticker adhesively secured to a wheel of a human-powered vehicle.

On the other hand, Finkenbinder ('851) discloses a human-powered vehicle (Figure 1) comprising reflective stickers 50A-58A adhesively secured to the wheel (Figures 1, 3 and 6, column 32-49) .

In addition, It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the safety light structure of Kanenari et al. ('236 B1) in view of Elam, Jr. et al. ('653) by providing the reflective stickers as taught by Finkenbinder ('851) for the benefits of visual and ornamental safety indicators.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanenari et al. (6,431,923 B1).

Kanenari et al. ('236 B1) discloses a pneumatic tire 1 (Figure 1) comprising:

- a photo-luminescent section "b" positioned on the side wall "a", and the photo luminescent section containing phosphorescent layer (Figure 1, column 2, lines 45-60, and claims 2 and 4); and

However, Kanenari et al. ('236 B1) does not specifically teach the tire and a light source attached to the frame of a human-powered vehicle, and the light source directing its emitted light towards the photoluminescent material.

On the other hand, Elam, Jr. et al. ('653) discloses a human-powered vehicle including 100 comprising safety light structure (Figure 1) comprising:

- a photo-luminescent section 54 (Figure 1, column 2, lines 53 and 54) and a reflector (Figure 1, column 2, line 38) positioned on the frame.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the light safety structure of Elam, Jr. et al. ('653) by positioning the photoluminescent section and a reflective section on at least one wheel as taught by section formed as taught by Kanenari et al. ('236 B1) for the benefits and advantages safety indication visual in light as well as in dark or low level light.

In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to realize the operational – after glowing - requirement of photoluminescent material, and thus provide a light source, either of UV spectrum or visual spectrum, directing its light towards the photo luminescent section for the benefits of making the photo luminescent material glow after the light source is removed from operation.

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10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanenari et al. (6,431,923 B1) in view of Majumdar et al. (US Patent No.: 6,807,995 B1) and LeFranc (US Design Patent No.: D486,124 S).

Regarding Claim 15, Kanenari et al. ('236 B1) discloses a pneumatic tire 1 (Figure 1) comprising a photo luminescent section and a reflective section. However, Kanenari et al. ('236 B1) does not teach a pneumatic tire including a reflective section and photo luminescent sections located on the sidewall, and forming rings following the circumference of the tire.

On the other hand, Majumdar et al. ('995 B1) discloses a glow-in-dark tire 10 (Figure 1) including a ring 20 formed of photo luminescent material 30, and the ring positioned on the sidewall of the tire 10 (Figure 1, column 7, lines 33-38).

In addition, LeFranc (US Design Patent No.: D486,124 S) discloses a tire including a reflective ring in its sidewall (Figure 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tire of Kanenari et al. ('236 B1) by providing reflective section formed as taught by LeFranc and the ring of photo luminescent material as taught by Majumdar et al. ('995 B1) for the benefits and advantages safety indication visual in light as well as in dark or low level light.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanenari et al. (6,431,923 B1) in view of Hare (UK Patent No.: GB 2265586 A).

Kanenari et al. ('236 B1) discloses a pneumatic tire 1 (Figure 1) comprising a reflective section and photo luminescent sections – layers -. However, Kanenari et al.

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('236 B1) does not specifically disclose the reflective section made of reflective particles vulcanized into the tire.

On the other hand, Hare (UK Patent No.: GB 2265586 A) discloses a vehicle tire 2 comprising reflective particles vulcanized into the tire 2 (Abstract, Figure 1, Page 3, third and fourth paragraphs).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the tire of Kanenari et al. ('236 B1) by providing reflective section formed as taught by Hare (UK Patent No.: GB 2265586 A) for the benefits and advantages structurally permanent visual indicator.

12. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niezrecki et al. (6,779,913 B2) in view of Baumberg et al. (5,869,930).

Regarding Claim 18, Niezrecki et al. ('913 B2) discloses a safety lighting structure 25 for a bicycle wheel including a rim 24 (Figure 8, column 3, lines 56-59); the safety structure 25 further including:

- an electroluminescent element attached to the wheel rim 24 (Figure 8, column 3, lines 56-59); and
- an electrical power source 34 (Figure 8, column 3, lines 37 and 38).

However, Niezrecki et al. ('913 B2) does not specifically teach the electroluminescent element being a wire including a first electrical conductor coated with an electro-reactive (electroluminescent) substance wrapped along the length of a second smaller conductor.

On the other hand, Baumberg et al. ('930) discloses an electroluminescent light

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source (Figure 2) comprising a wire including a first electrical conductor 2 coated with an electro-reactive (electroluminescent) substance 6 wrapped along the length of a second smaller conductor 14 (Figure 2, column 3, lines 5-12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the safety light structure of Niezrecki et al. ('913 B2) with the improved electroluminescent light source as taught by Baumberg et al. ('930) for the benefits and advantages of increased electrical capacity and brightness.

Regarding Claim 19, Niezrecki et al. ('913 B2) in view of Baumberg et al. ('930) discloses the electroluminescent light source further comprising a transparent – clear – tube 12 (Baumberg, Figure 2, column 2, lines 62 and 63).

Allowable Subject Matter

13. Claim 20 is allowed.

The prior art of record, including Niezrecki et al. (6,779,913 B2) and Baumberg et al. (5,869,930), does not show or suggest the applicant's invention as claimed. Specifically, the prior art of record does not disclose combining safety a human-powered vehicle lighting structure combining a tire being inflated with a low-radioactive gas as recited in Claim 20.

The above-indicated combination, a human-powered vehicle including wheel with a tire inflated with a low-radioactive gas is also unique.

Neither combined nor individual teaching of Niezrecki et al. (6,779,913 B2) and Baumberg et al. (5,869,930) discloses a human-powered vehicle combining the above-

indicated features.

Therefore, Claim 20 is allowed over prior art.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frosythe et al. (U.S. Patent No. 6,832,847 B2), Bare, IV (U.S. Patent No.: 5,523,925)

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hargobind S Sawhney whose telephone number is 571 272 2380. The examiner can normally be reached on 6:15 - 2:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571 272 2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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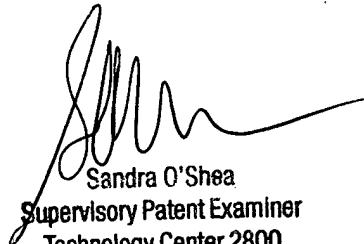
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Should you have questions on access to the Private PAIR system, contact the
Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HSS

2/17/2005



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